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CERTIFIED MAIL

February 16, 2017

Mr. Douglas McDaniel
Chief, Waste and Chemical Section
Enforcement Division
U.S. Environmental Protection Agency
75 Hawthorne Street
San Francisco, CA 94105

Subject: RCRA Inspection – Reply to Notice of Violation
Shell Martinez Refinery – EPA ID No. CAD009164021

Dear Mr. McDaniel:

On March 30, 2015, USEPA (in conjunction with Department of Toxic Substances Control and Contra Costa County Health Services staff) concluded a RCRA inspection of the Shell Martinez Refinery. The USEPA subsequently sent a Notice of Violation.

Please see responses to each of the requested items in the enclosed Attachment I.

Shell would like to schedule a teleconference or face-to-face meeting with USEPA to discuss the issues raised during the inspection. Please contact Mr. Michael Monson at (925) 313-5516 to schedule this meeting.

Sincerely yours,

Gordon Johnson
Manager – Environmental Affairs
Shell Oil Products US, Martinez Refinery

Attachments

ATTACHMENT I

Finding 1 (Page 5):

SMR failed to make a waste determination for spent paint wastes at the paint shop.

EPA Notes:

- *On 3/26/2015, EPA/DTSC inspectors visited the paint shop and the sand blast pad area which was managed by SMR's contractor, Brand. According to Mr. Joaquin Rodriguez, Brand's Superintendent for Painting, the spent paint waste was not hazardous waste and was being handled as non-hazardous. EPA determined that D001 and D035 RCRA wastes were being generated at the paint shop, including Carboline paint thinner #2 (reported annual usage of approximately 200 gallons), based on the SDS information provided by SMR in SMR's 8/26/2015 written response to EPA's information request (Appendix B).*

Regulatory Citation
22 CCR § 66262.11

Shell Response:

Following the March 2015 inspection, Shell prepared a guidance document for the Sandblast Yard, for the proper disposition of the paint wastes. This guidance document has been provided to the contractor that manages the Sandblast Yard. The waste paints guidance document is included as Attachment I-A.

Finding 2 (Page 6):

SMR failed to make a hazardous waste determination for the wastewater streams that are discharged into surface impoundments.

EPA Notes:

- *According to SMR's Stormwater Pollution Prevention Plan (Appendix G), SMR operates the following stormwater surface impoundments (all unlined ponds): Upper and Lower Lake Slobodnik (Pond E-002), Vine Hill Pond (Pond E-004), Flare Area Pond (E-005), and Volatiles Storage Area Pond (Pond E-007). Stormwater runoff from the process areas, tank farms, and storage areas are collected in these ponds. In addition, combined process wastewater and stormwater are fed into the Effluent Treatment Plant (referred to as Pond E-001 or ETP-1), an unlined surface impoundment.*
- *The stormwater runoff from the process areas, especially during the "first flush," which is the initial surface runoff during the rain storm, could contain benzene at the hazardous waste level. SMR's total annual benzene (TAB) reports that are part of the Annual Benzene Waste Operations NESHAP report (Appendix E), showed significant amounts of benzene are being released from the process units.*
- *SMR does not test the stormwater for benzene when it is discharged into the unlined stormwater holding ponds (E-002, E-004, E-005, and E-007).*
- *The ETP-1 (E-001) feed is tested only as a composite sample from four grab samples for benzene semi-annually, and not tested in conjunction with a storm event.*

Regulatory Citation
22 CCR § 66262.11

Shell Response:

While Shell's BWON TAB report does show process streams containing benzene, Shell's stormwater impoundments (E-002, E-004, E-005, and E-007) are permitted under the refinery's NPDES Permit R2-2012-0052 to receive stormwater only. As such, Shell has developed a Stormwater Pollution Prevention Plan (SWPPP) to help ensure that the first flush of any potential process materials are to effluent treatment plants 2 & 3 (ETP-2/3) and to help ensure that tank levees drained to a stormwater impoundment are free of hydrocarbon prior to being drained. For example:

- Page 7 of the SWPPP notes: *Captured storm water from the entire Lake Slobodnik system is normally discharged directly in compliance with the Refinery's NPDES permit with the exception of the first flush of storm water, which is contained and routed to the ETP.*

- Appendix E of the SWPPP notes: *Per procedure C(F)-11 (Appendix D) all tank levees are kept locked and car-sealed closed at all times except when they are actually being drained. Therefore, any stormwater that falls in the tank levee areas is held there until it can be visually inspected.* The plan goes on to note that: *"Stormwater that is clean will be routed to [the stormwater impoundment] while any water that may contain hydrocarbon will be collected via a vacuum truck for processing at ETP."*

Samples from several of the impoundments have been tested for benzene the past few years and all found to be non-detect. These results are summarized in the following table:

Stormwater Impoundment	Sample Date	Benzene Concentration (ug/l)
E-002 (upper lake)	12/13/2013	ND (MDL = 0.9)
E-002 (upper lake)	2/13/2014	ND (MDL = 0.9)
E-002 (middle lake)	2/13/2014	ND (MDL = 0.9)
E-004 (lower lake)	11/23/2015	ND (MDL = 0.9)
E-004 (lower lake)	11/3/2016	ND (MDL = 0.9)
E-004 (lower lake)	1/6/2017	ND (MDL = 0.18)
E-004 (lower lake)	1/25/2017	ND (MDL = 0.9)

EPA notes that the ETP-1 feed is only tested as a composite sample from four grab samples for benzene semi-annually and not tested in conjunction with a storm event. The indicated sampling frequency is what is contained in Shell's delay of closure permit for Pond 7. While the sampling events may or may not coincide with a storm event, the net impact of a storm event is to increase the quantity of stormwater flowing through Pond 7 which has the net impact of decreasing any concentration of benzene which might be present.

In summary, EPA should withdraw Finding 2 on page 6 based on the following clarifications:

- Shell's stormwater ponds are permitted to receive stormwater only
- Shell's SWPPP contains provisions for sending the first flush rain event material from process areas to the effluent treatment plant.
- And in general terms, the use of NESHAPS TAB results for process wastewater streams within closed systems with no connection to the stormwater ponds cannot be used to characterize the stormwater.

Finding 1, Page 7:

SMR is storing and treating hazardous waste in the Recovered Oil Process (ROP) Unit and laboratory vessel (V-18259) without a RCRA permit.

EPA Notes:

- *The lab waste tank V-18259 was holding RCRA regulated wastes (D011, D022, F003 and F005) to which the oil-bearing materials exclusion does not apply.*
- *In SMR's 8/26/2015 written response to EPA's information request (Appendix B), Question E.1.(c), SMR listed 29 discarded solvents that were placed in V-18259. The 29 discarded solvents consisted of both spent solvents with hydrocarbons (CH chain) and spent solvents without hydrocarbons. The content of V-18259 is hard piped to Tank 15096 (Tank S-4319 in SMR Permit from BAAQMD, Permit Application # 8407) which is part of the ROP Unit. The waste streams from the Brine-Deoiling Unit and other waste streams transferred via vacuum trucks are also fed into Tank 15096 (Tank S-4319 in SMR Permit from BAAQMD, Permit Application #8407) which is located at the ROP Unit. The material from Tank 15096 is then pumped to a 20,000-gallon Baker Box Mix Tank (S-10 Sludge storage tank in Permit Application #6703 from BAAQMD) where a demulsifying agent, hydrogen sulphide scavenger, and pH control chemicals are added.*
- *According to SMR's 8/26/2015 written response and EPA's inspector's interview with Brock Nethery, Project Manager with Clean Harbors who operates the ROP Unit, a three phase centrifuge separates the waste stream (sludge) from the Baker Box Mix Tank into oil, water and solids phases.*
    - *(a) The solids are accumulated in roll-off bins. Each roll-off bin is sampled and analysed for benzene content and water content. If the TCLP benzene level is >0.5 ppm, the waste is sent to the Clean Harbors (CH) HW disposal facility in Aragonite UT with a RCRA hazardous waste code of D018 (benzene) and a California waste code of 223 (unspecified oil containing waste) on the associated hazardous waste manifest. If the TCLP benzene level is <0.5 ppm, the waste is sent to the CH facility in Buttonwillow, California with a California waste code of 223. In addition, the first roll-off bin of each month is analysed for TCLP, STLC and TTLC and volatiles (EPA Method 8260), semi-volatile (EPA Method 8270) and metals (EPA Method 6010).*
    - *(b) The water portion of the materials after phase separation goes into the wastewater treatment plant for treatment.*
    - *(c) The recovered oil portion is sent to the crude mix tank before being fed into the crude unit.*
    - *(d) The ROP unit also has a thermal oxidizer (incinerator) unit that performs treatment of VOCs with an average destruction rate of >95%. The ROP unit is also equipped with a scrubber to remove sulfur dioxide generated from the operation.*
- *In SMR's 8/26/2015 written response to Question E.1(a), SMR asserted that the laboratory waste vessel V-18259 is part of a system used for the recovery of oil from oil bearing materials, and is exempt from RCRA regulations under the California Health & Safety Code (HSC) §25144(c).*
- *Under HSC 25144(c)(3), to be excluded from regulation, "oil bearing materials" must meet certain aspects of California's exclusion for "recyclable materials." Given the minimal hydrocarbon content of some lab wastes, and the lack of any hydrocarbon content in other lab wastes, SMR is not legitimately recycling oil from those wastes and the oil-bearing materials exclusion does not apply.*
- *The discarded solvents, as presented in SMR's 8/26/2015 written response, are RCRA regulated wastes with the following waste codes: F005 (spent toluene), F003 (spent acetone, spent xylene), D011 (spent silver nitrate) and D022 (spent chloroform).*

- *Because non-excluded hazardous waste from the lab are placed in Vessel 18259 and hard-piped to Tank 15096, under the mixture rule, the contents of both Vessel 18259 and Tank 15096 are hazardous wastes. (Refer to notes in Count 1.) The hazardous waste content of V-18259 is mixed with other materials in Tank 15096 which is fed into the ROP centrifuge system. SMR is storing and treating RCRA regulated hazardous wastes in V-18259 and the ROP system without a permit.*

Regulatory Citation
22 CCR § 66270.1(c)

Shell Response:

Shell believes this finding is based on a misunderstanding of the question from EPA in the supplemental information request.

When EPA asked *"Provide a list and a Safety Data Sheet (SDS) of each type of discarded solvent that is placed in the tank. Explain how the discarded solvents placed in the tank are recovered or reclaimed by Shell or its contractors. Provide any supporting documentation that demonstrates that the solvents are legitimately being reclaimed by Shell or its contractors (Question E.1.c.),"* Shell personnel inadvertently interpreted this question to mean what solvents/chemicals are used at the QA lab to analyse the various hydrocarbon samples. Shell in no way meant that spent solvents not containing hydrocarbon were being placed in V-18259.

In response to questions regarding the federal Oil Bearing Hazardous Secondary Material exclusion from Tetra Process Services, LLC, EPA stated (RO14677):

> "In the final rule published in the August 6, 1998 Federal Register (63 FR 42110), **while we did not specify a minimum oil content for these oil-bearing hazardous secondary materials**, we did stress that there must be some recoverable amount of hydrocarbons to make the recycling legitimate.
>
> "Regarding the types of oil-bearing hazardous secondary materials to which the exclusion applies, generally it does not matter whether the materials are hazardous because they are listed in 40 CFR, Subpart D, or because they exhibit a hazardous characteristic under Part 261, Subpart C. **The exclusion applies to oil-bearing hazardous secondary materials, irrespective of whether they are listed or exhibit a hazardous characteristic**."

Expired chemicals (including those listed on the table accompanying the response to question E.1) are not placed in V-18259, but are rather consolidated and included in Lab Pack shipments as needed.

The hazardous secondary materials that are placed in V-18259 consist of petroleum samples (unanalyzed) and the residuals from analyses (which contain the sample being analyzed, the chemicals used in the analysis, and as needed, solvent to remove hydrocarbon from the lab equipment). Therefore, these secondary materials do contain recoverable hydrocarbon and qualify for the oil-bearing materials exclusion. On that basis, SMR disagrees with the statement that the contents of Vessel 18259 and Tank 15096 are hazardous wastes by operation of the mixture rule, or that SMR is storing and treating RCRA hazardous wastes without a permit. SMR will review its procedures and operations to ensure that lab wastes that do not contain sample material are not included in the waste stream fed into the ROP system.

EPA also references the California Health and Safety Code, section 25144(c)(3) for the analogous California oil-bearing materials exclusion but, like the federal exclusion, there is no minimal hydrocarbon content specified in the California exclusion.

EPA should withdraw Finding 1 on page 7, as well as Finding 2 on page 8, the finding on the bottom of page 11, and the finding on the top of page 13, as these findings are based on the misunderstanding of the composition of the laboratory wastes.

Finding 2, Page 8:

SMR is storing hazardous wastes in 19 containers, referred to as "R2D2s" or "gas buggies," at various locations in the refinery production area without a permit.

EPA Notes:

- *On 3/36/3015, EPA inspectors inspected the Cracked Product Field Lab. According to EPA's interview with Chris Robbins, operations manager of the SMR Coker Unit, spent solvents (e.g. acetone and chloroform), other lab wastes (e.g. silver nitrate) and hydrocarbon wastes are collected in a container in the laboratory hood (CIMG2545). These wastes are then-accumulated in the R2D2 gas buggy labelled "Excluded Recyclable Materials" (CIMG2546). Other discarded materials from the testing performed on the process block are accumulated in the R2D2. The content of the R2D2 is then fed to the ROP Unit.*
- *In SMR's 8/26/2015 response to EPA (Appendix B), Question G.1, the facility asserted "oil bearing hazardous secondary materials" exclusion under 40 CFR § 261.4(a)(12)(i) for the spent solvent in R2D2.*
- *EPA enforces the California authorized program. Under HSC 25144(c)(3), to be excluded from regulation, "oil bearing materials" must meet certain aspects of California's exclusion for "recyclable materials." Given the minimal hydrocarbon content of some wastes collected in the R2D2 containers, and the lack of any hydrocarbon content in others, SMR is not legitimately recycling oil from those wastes and the oil-bearing hazardous secondary materials exclusion does not apply.*
- *The spent solvent wastes in the R2D2 containers include F003 (spent acetone), D022 (spent chloroform) and D011 (spent silver nitrate). The containers were storing hazardous wastes without a permit.*
- *Each of the containers has a capacity of 15 gallons.*

Regulatory Citation
22 CCR § 66270.1(c)

Shell Response:

The response to Finding 1, Page 7, above, applies here, as well. As noted above, there is not a minimum hydrocarbon content to qualify for the oil-bearing materials exclusion. SMR will, as with Finding 1, review its procedures and operations to ensure that lab wastes that do not contain sample material and do not have recoverable hydrocarbons are not disposed of in the "gas buggies."

Finding 3, Page 9:

SMR is storing and treating hazardous waste heat exchanger bundle pad cleaning sludge (K050), API separator sludge (K051), petroleum refinery primary separation sludge (F037) and petroleum refinery secondary separation sludge (F038) on the heat exchanger bundle cleaning pad in the below-grade sump without a permit.

EPA Notes:

- *The facility handles heat exchanger bundle cleaning sludge, a listed waste (K050), and other listed wastes (F037/F038) on the heat exchanger bundle cleaning pad. The oil-bearing materials exclusion does not apply to wastes on the pad because the wastes are land-placed.*
- *The liquid portion of these wastes drain from the pad to sumps and are transferred to the Liquid Handling Site for primary oil/water/solids phase separation.*
  - *(a) The water portion goes into the refinery wastewater treatment system that is covered under a NPDES permit.*
  - *(b) The solids portion is disposed of as hazardous wastes if the TCLP benzene level exceeds 0.5 ppm. When the TCLP benzene level doesn't exceed 0.5 ppm, the materials are sent off as non RCRA hazardous waste.*
  - *(c) The oil portion is injected into the Coker during the quench cycle.*
- *At EPA's request, the Contra Costa County Health Department inspected the facility on 12/18/2015 and took pictures of the heat exchanger bundle cleaning pad (IMG_1201[1] and IMG_1203[1]). The photos showed accumulation of liquid and solids on the pad.*
- *Vacuum Truck Operation Checklist (Appendix F) dated 10/16/2014 documented an estimated quantity of 2,500-gallon heat exchanger bundle sludge was directed to the bundle cleaning pad.*
- *SMR reported approximately 37,233 tons of waste (wastewater and non-wastewater) was managed during the heat exchanger bundle cleaning operations on the heat exchanger bundle cleaning pad in 2014.*

Regulatory Citation
22 CCR § 66270.1(c)

Shell Response:

The bundle cleaning pad is a concrete-lined area of the refinery where heat exchanger bundles are cleaned by hydroblasting. The pad is sloped, so that any material generated naturally drains to a concrete sump. As part of the daily bundle cleaning operations, personnel periodically rinse any solids that may accumulate on the pad into the sump. The material in the sump (including solids) is transferred via vacuum truck to the Liquid Waste Handling Site, where it is placed into a 20,000 gallon container (Baker Box). This material is then pumped through a strainer to remove miscellaneous debris and large particles, prior to being transferred (via vacuum truck) to the Delayed Coking Unit, where it is injected during the quench cycle.

In addition to the bundle cleaning pad waste, additional wastes are routed to the Shaker, including API Separator emulsion (K051), and primary/secondary emulsions (F037/F038).

The solids from the strainer (referred to as the Shaker) are sent to Clean Harbors – Aragonite under the waste profile Shaker Solids, a F037/F038/K050/K051 listed hazardous waste.

Because the material from the Bundle Cleaning Pad is recycled to recover residual hydrocarbon, PSC (the vacuum truck and Bundle Cleaning Pad operator) occasionally rinses residual hydrocarbon from their vacuum trucks at the pad. This material (along with the heat

exchanger cleaning waste) is then recycled in the DCU after passing through the Shaker at the Liquid Waste Handling Site.

Residual solids from the Recovered Oil Process are not placed on the Bundle Cleaning Pad.

Regarding the claim that the oil-bearing hazardous secondary materials exclusion does not apply because "the wastes are land-placed," the pad is concrete-lined, and drains to a concrete-lined sump, not exposed soil. As explained above, the bundle cleaning pad provides proper containment of all bundle cleaning sludges and oil-bearing materials on concrete pad, concrete channels or concrete collection points prior to its transfer to the refinery's hydrocarbon recovery systems. Along this entire generation, management, transfer and recycling process, no bundle cleaning sludges or other oil-bearing materials are "placed on the land." Therefore, the bundle cleaning sludges and other oil-bearing materials generated at the bundle cleaning pad are fully excluded as oil-bearing hazardous secondary materials.

A review of the 2014 Annual Facility Report and the Hazardous Materials Business Plan was unable to verify EPA's statement that "SMR reported approximately 37,233 tons of waste (wastewater and non-wastewater) was managed during the heat exchanger bundle cleaning operations on the heat exchanger bundle cleaning pad in 2014." The total quantity of hazardous waste shipped off-site in 2014 was approximately 6,728 tons. Additionally, approximately 18,900 barrels were processed through the Shaker, of which 1,185 barrels (208 tons) was from the bundle cleaning pad.

EPA should withdraw this finding as it is based on the incorrect assumption that material at the Bundle Cleaning Pad is placed on the ground.

Finding 4, Page 10:

SMR is performing treatment (evaporation) of the hazardous wastes at the sandblast area/paint shop without a permit.

EPA Notes:

- *Numerous containers of solvent (D001 and/or D035) and aqueous-based paint wastes were left open to dry (CIMG2515, CIMG2516). The secondary containment at the shed at the paint shop was almost full of liquid (CIMG2518).*
- *EPA inspectors determined the contents of these containers are hazardous waste (see Count 1).*
- *Evaporating the VOCs component of the hazardous waste is considered treatment under RCRA because it is a method that changes the physical and chemical composition of the hazardous wastes.*
- *The MultiRAE portable gas monitor carried by the DTSC inspector also showed evaporation because it detected a total VOCs of 12 ppm in ambient air at the paint shop area, near the open paint cans.*

Regulatory Citation
22 CCR § 66270.1(c)

Shell Response:

As mentioned in the response to Finding 1, p. 5, following the March 2015 inspection, Shell prepared a paint waste compliance document, and provided this document to the contractor that manages the Sandblast Yard.

Finding 1, Page 11:

SMR failed to minimize the possibility of a release of hazardous waste carbon monoxide boiler (COB) fly ash, a listed waste (K048 and D010), at the bag house area near the COBs.

EPA Notes:

- *EPA inspectors observed a thin layer of fly ash (K048 and D010) on the wooden structure beneath the baghouse that was un-containerized.*
- *The fly ash waste was generated by the permitted RCRA COB unit which processed K048 and D010 RCRA wastes (CIMG2491).*

Regulatory Citation
22 CCR § 66262.34(a)(4)
22 CCR § 66265.31

Shell Response:

During a following inspection by DTSC in 2016, Shell received a violation notice for a leak on the bagging facility. Following that inspection, Shell made modifications to the bagging facility, which resolved the leak that was the source of the thin layer of fly ash noted by the EPA. The letter to DTSC reporting the return to compliance is included as Attachment I-B.

Finding 2, Page 11:

SMR failed to minimize the possibility of a release of benzene, a characteristic hazardous waste (D018) at various locations.

EPA Notes:

- *SMR's total annual benzene (TAB) reports documented benzene release at a concentration of 9.9 ppm from the process wastewater tank T-13188 in 2014. The level exceeded the toxicity characteristic limit for benzene (0.5 ppm) using toxicity characteristic leaching procedure (TCLP).*
- *SMR's 2012 TAB report documented benzene releases at 11,000 ppm and 250 ppm due to drips/leaks from vacuum trucks at the ROP Unit. These levels exceeded the TCLP level for benzene.*

Regulatory Citation
22 CCR § 66262.34(a)(4)
22 CCR § 66265.31

Shell Response:

Similar to the other benzene related finding, EPA is incorrect in assuming that items identified as a "Waste Stream" in the Total Annual Benzene reports means that the stream has been characterized as a waste as defined by RCRA. Subpart FF defines waste as "any material resulting from industrial, commercial, mining or agricultural operations, or from community activities that is discarded or is being accumulated, stored, or physically, chemically, thermally, or biologically treated prior to being discarded, recycled, or discharged." This definition does

not include the exclusions at §261.4 (specifically the oil-bearing hazardous secondary materials exclusion at §261.4(a)(12)(i), and the exclusion at §261.4(c) for materials contained in a process unit).

Additionally, although the waste stream description could be interpreted to mean that a release, or spill, of a benzene containing stream has occurred, additional information on each stream indicates otherwise. It is important to note that the "Benzene Control" columns only indicate whether or not the equipment meets the BWON standards under Subpart FF (also note, that under the regulation, subject facilities are allowed to have up to 6 MG/year "uncontrolled" benzene). Specifically, for the streams identified by EPA with this finding and included in Appendix E):

- Stream SLOP013 from the 2012 TAB report describes potential drips that occur while disconnecting vacuum truck hoses from various refinery equipment. Standard work practice is to collect the drips in buckets and return it to the Recovered Oil process. The stream is listed since while it is in the bucket, it is not controlled per Subpart FF.

- Stream SLOP017 from the 2012 TAB report is similar to SLOP013, except these are drips that occur at the Recovered Oil Process tank. Similar to SLOP013, the material is returned to the Recovered Oil process.

- Stream SLOP027 from the 2014 TAB report describes a spill that occurred at the Process Water Tanks while transferring material from a vacuum truck. In this case, the spill was contained in a sump, and then transferred to Effluent Treatment Plants 2 & 3, which are permitted to treat benzene containing waste waters under Tiered Permits.

22 CCR § 66265.31 states that "Facilities shall be maintained and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, or surface water which could threaten human health or the environment." None of the releases identified by EPA were large enough that they threatened human health or the environment.

EPA should remove this finding as the identified streams, while meeting the definition of a waste stream under the BWON regulations, are not waste streams under RCRA or the California Hazardous Waste regulations, nor did the releases threaten human health or the environment.

Finding, Page 11 (bottom):

SMR failed to manage laboratory waste in V-18259 and Tank 15096 at the ROP Unit in accordance with RCRA Part 265 Subpart J tank requirements.

EPA Notes:

- *EPA determined the V-18259 and Tank 15096 were holding non-exempt hazardous wastes (see Count 2). Therefore these two tanks must meet the applicable requirements for a hazardous waste storage tank.*
- *Specifically, EPA notes the facility lacks the tank system integrity assessment for the existing tank system required under § 66265.191 and the inspection records required under § 66265.195.*

Regulatory Citation
22 CCR § 66262.34(a)(1)(A)

22 CCR § 66265.191
22 CCR § 66265.195

Shell Response:

As described above in the response to Finding 1, page 7, the oil-bearing materials from the QA and field labs meet the requirements for the exclusion at HSC §25144(c)(3), and therefore, vessel V-18259, Tank 15096 and the additional equipment at the Recovered Oil unit are not subject to the Subpart J requirements.

Finding, Page 12 (middle):

SMR failed to transport a full satellite accumulation container within three days of being filled to the facility's less than 90-day accumulation area.

EPA Notes:

- *On March 26, 2015, EPA observed a total of two 55-gallon containers of paint solvent waste that were designated for transfer to the Liquid Waste Handling site, a 90-day accumulation area. One of the two containers is a full container of paint solvent waste (D001) (far right of CIMG 2512) that had been stored at the paint shop since March 11, 2015 and exceeded the 3 days pre-transport accumulation time requirement.*
- *25 super sacks (one cubic yard each) of fly ash (K048 and D010) were observed near the point of generation. Each super sack holds the equivalent of approximately 202 gallons and thus exceeds the 55 gallon of hazardous waste accumulation limit at or near point of generation (CIMG 2492).*

Regulatory Citation
22 CCR § 66262.34(e)(3)

Shell Response:

The full container in the Satellite Accumulation Area at the Paint Shop was transferred to the 90-day accumulation area by the end of the day that Shell was notified by EPA of the violation.

The fly ash super sacks are not stored in a satellite accumulation area, even though they are located at the point of generation (due to the size of the super sacks, even a single super sack would exceed the allowable volume under the SAA rules). Rather, they are stored in a 90-day accumulation area. The area contains appropriate signs notifying personnel that the area is a hazardous waste storage area, and the area is included in the written contingency plan. Additionally, the super sacks are inspected weekly as required by 22 CCR § 66262.34(a).

EPA should remove the reference to the fly ash super sacks as they are being managed under the 90-day rules.

Finding, Page 12 (bottom):

SMR failed to comply with the required container management standards for hazardous waste generators.

EPA Notes:

- *Containers containing spent solvent (F003, F005) under the laboratory hood in the QA laboratory were open (CIMG2528).*
- *Paint containers at the Sand Blast area (D001, D035) were open (CIMG 2516 & CIMG 2517).*
- *Hazardous waste labels were missing on hazardous waste containers #6A, #11, #15, #19, #20, #22 in the fume hood and V-18259 in the QA laboratory (CIMG 2528).*

Regulatory Citation
22 CCR § 66262.34(a)(1)(A)
22 CCR § 66262.34(a)(2)
22 CCR § 66262.34(a)(3)
22 CCR § 66265.173(a)

Shell Response:

The open topped containers in the QA lab, which were used to collect broken and once-use lab-ware, have been removed. This waste is now being accumulated in the red, self-closing "Hazardous Waste" containers.

As mentioned above in the responses to findings 1 (p. 5) and finding 4 (p. 10), Shell has provided guidance and will continue to work with the Sandblast Yard contractor, Brand to assure compliance with the hazardous waste regulations.

Shell has reviewed the containers in the QA lab and labelled them as necessary.

Finding, Page 13 (top):

SMR has failed to determine, for each piece of equipment (e.g., valves, flanges), whether the equipment contains or contacts a hazardous waste with organic concentrations of at least 10% by weight.

EPA Notes:

- *SMR failed to determine whether V-18259 contains or contacts hazardous waste with organic concentrations of at least 10% by weight and is therefore required to comply with Subpart BB emission standards.*

Regulatory Citation
22 CCR § 66262.34(a)(1)(A)
22 CCR § 66265.1063(d)

Shell Response:

Since V-18259, Tank 15096, and the Recovered Oil unit are excluded under the oil-bearing materials exclusion of the health and safety code, the Subpart BB emission standards do not apply.

Finding, Page 13 (bottom):

SMR managed hazardous wastes in the ETP-1 biotreater, an unlined surface impoundment.

EPA Notes:

- *On August 21, 2003, DTSC approved delayed closure of the biotreater, ETP-1 (Pond 7), an unlined RCRA surface impoundment, without requiring clean out of the content in the unit or retrofitting of the unit. The permit specified that the "Permittee shall not accept, store, treat, or otherwise manage hazardous waste in the ETP-1 Biotreater."*
- *One of the conditions of the DTSC's approval is to conduct groundwater monitoring of ETP-1 (Pond 7) under the California Regional Water Quality Control Board San Francisco Bay Region, Site Cleanup Order.*
- *Well 228 is associated with the monitoring of the RCRA unit, biotreater ETP-1, according to California Regional Water Quality Control Board San Francisco Bay Region Order R2-201400025, Table 1.*
- *SMR groundwater monitoring data consistently showed benzene present at hazardous waste level (>0.5 ppm for toxicity characteristic) in monitoring well 228 from 2006 to 2015.*
- *Because the ETP-1 was receiving wastewater exceeding toxicity characteristic for benzene (D018), and the sediment sludge accumulated in the pond was not cleaned out per requirements in the Hazardous and Solid Waste Amendments (HSWA) of 1984, the unit is still managing hazardous waste.*

Shell Response:

EPA's suggestion that the wastewater entering ETP-1 must be greater than 0.5 ppm solely due to the groundwater concentration exceeding 0.5 ppm benzene is based on a faulty premise that fails to take into consideration the following:

The concentration of benzene in the groundwater within the ETP-1 biotreater area and monitoring well 228 is a historic and ongoing result of the past single biotreater operation at the Shell Martinez Refinery prior to 1995 when the benzene concentration of the influent refinery wastewater exceeded 0.5 ppm. The continued detection of benzene at concentrations greater than 0.5 ppm from groundwater samples from monitoring well 228 is not an indication that the current influent wastewater to the ETP-1 biotreater exceeds 0.5 ppm.

In addition to the ETP-1 biotreater, the WWTU area historically included additional untreated wastewater impoundments (in the area adjacent to monitoring well 228 currently occupied by the ETP-2 and ETP-3 aerators that were properly assessed and removed in the mid-1980s). These units may have also contributed to the benzene content at groundwater monitoring well 228.

The soils in the WWTU area are a mixture of fine-grained bay mud and clays. The low transmissivity and low dissolved oxygen content of these soils will maintain any historic contamination (such as benzene) for an extended period of time.

To contain and remediate legacy soil and groundwater pollutants (such as benzene) in the WWTU area, several groundwater recovery systems have been installed. The refinery submits semi-annual monitoring reports for these and other groundwater remediation and monitoring systems to the SFB-RWQCB and the DTSC.

In order to meet the Delay of Closure requirement for the ETP-1 biotreater (Pond 7), Shell directed appropriate refinery wastewater streams with higher benzene concentrations to the

ETP-2 aerator in order to consistently maintain ETP-1 biotreater influent benzene levels to 0.5 ppm or less. The letter from the DTSC granting Delay of Closure is included as Attachment I-C.

There is no ongoing accumulation of sediment/sludge in the ETP-1 biotreater. The ETP-1 biotreater uses several mechanical aerators to keep any influent solids and biosolids suspended within a mixed liquor. The ETP-1 biosolids recovery system continuously removes solids and waste biosolids (a non-hazardous waste).

Shell routinely samples the wastewater feed to ETP-1, as required by the current RCRA permit. The analysis from these samples (provided to EPA in an earlier response) demonstrate that the benzene concentration in the wastewater feed to ETP-1 is less than 0.5 ppm.

With regard to the Minimum Technological Requirements (MTRs) required under the Hazardous and Solid Waste Amendments of 1984, Shell applied for an exemption under 3005(j)(3) on March 27, 1992. The Department of Toxic Substances Control granted the exemption on March 21, 1994 (prior to the March 29, 1994 deadline per 40 CFR §265.221(h)). The letter from the DTSC is included as Attachment I-D.

EPA's statement that the ETP-1 biotreater "is still managing hazardous waste" should be removed from the report as it is unsupported by the facts (ETP-1 stopped treating wastewater containing benzene levels above 0.5 ppm in 1995).

Waste Paints & Coatings

Paints in aerosol canisters are managed as aerosol cans (see Aerosol Cans section above).

I. Storage/Accumulation

Multi-part liquid paint/coating residues (that were mixed and left over following painting activities) may be allowed to dry out; all other paints (including latex paints) must **NOT** be intentionally left out to dry, even within an enclosed environment (for example, in an enclosed bin). Intentionally allowing these paints to be transformed from liquid to solid is considered a form of **treatment** according to Title 22 of the California Code of Regulations.

Table 1	
Manufacturer	**Product**
Belzona	BELZONA ® 1591 (CERAMIC XHT)
Belzona	BELZONA ® 2211 (MP HI-BUILD ELASTOMER)
Belzona	BELZONA ® 4211 (MAGMA-STOP)
Carboline	Bitumastic 300M
Carboline	Plasite 4550
Carboline	Pyrocrete 241
Carboline	Rustabond
Sherwin Williams	DTM ACRYLIC
Sherwin Williams	PREPRITE PROBLOCK
Sherwin Williams	PROPARK
Sherwin Williams	SHERCRYL

Liquid paint/coating residues from Table 1 should be poured into the "Waste Latex Paint" bucket (there will be a total of 4 5-gallon buckets at the Sandblast Yard). A copy of Table 1 will be posted at the Sandblast Yard for reference. Empty containers and containers of dried paint should be placed in the "Mixed Hazardous Waste" container in the Sandblast Yard. The bucket lid must be replaced and closed tightly except when adding waste paint to the bucket. The bucket should be taken to the Liquid Waste Handling Site when full or at the end of the work week.

Liquid paint/coating residues from Table 2 should be poured into the "Waste Oil-Based Paint" bucket. A copy of Table 1 will be posted at the Sandblast Yard for reference. Empty containers and containers of dried paint should be placed in the "Mixed Hazardous Waste" container in the Sandblast Yard. The bucket lid must be replaced and closed tightly except when adding waste paint to the bucket. The bucket should be taken to the Liquid Waste Handling Site when full or at the end of the work week.

VI. Applicable Regulations

California Health and Safety Code (HSC) Section 25201.16 (Hazardous Waste Disposal)

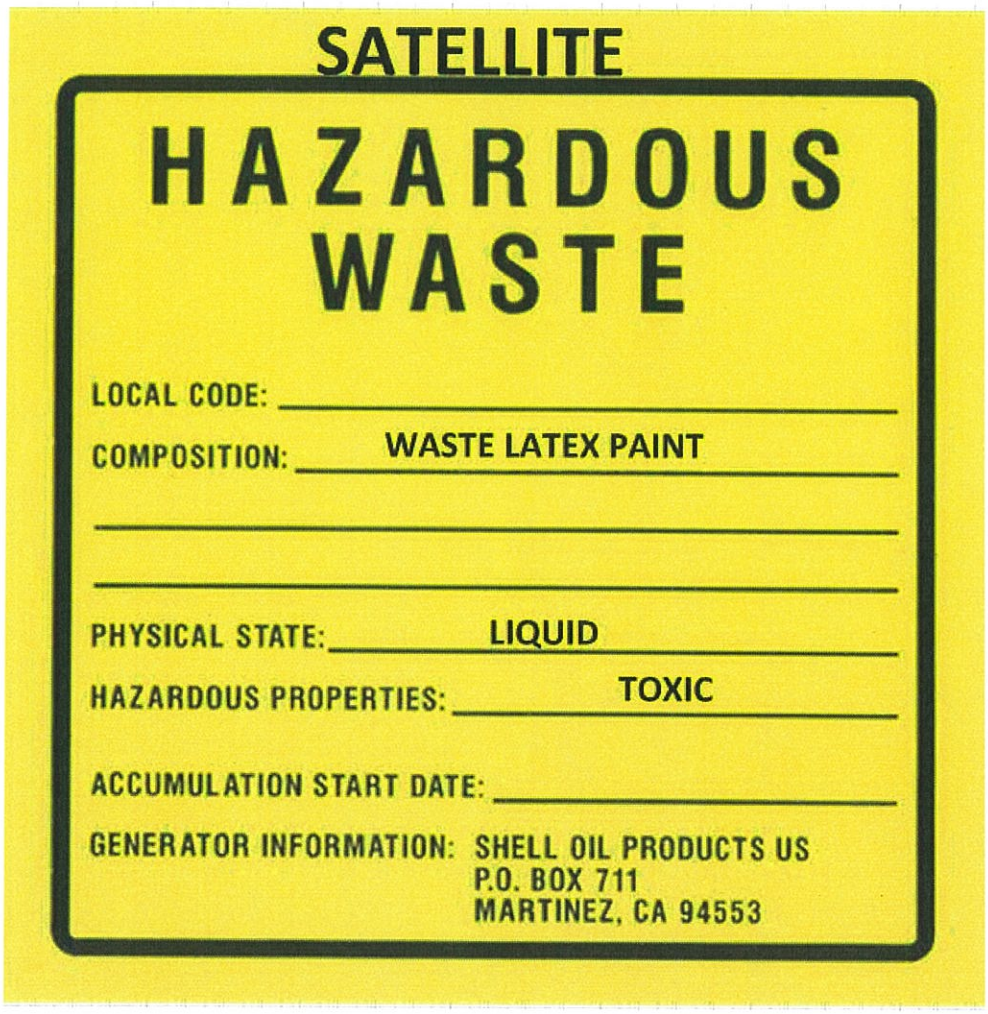
Title 22 California Code of Regulations (CCR) Section 66262.34 (Hazardous Waste Generators)

California HSC Section 25123.3 (Hazardous Waste Accumulation)

VII. Additional Information

For more information call Hazardous Waste Coordinator (ext. 3329).

Example of Waste Paint Can Label:



ATTACHMENT I-B

Shell Oil Products US

Martinez Refinery
PO Box 711
Martinez, CA 94553-0071
Tel (925) 313-3000
Fax (925) 313-3065

CERTIFIED MAIL

August 11, 2016

Mr. Dan Lynch, Supervisor
Enforcement and Emergency Response Program
Department of Toxic Substances Control
1515 Tollhouse Road
Clovis, CA 93611

Subject: Shell Martinez Refinery – EPA ID No. CAD009164021
DTSC Focused Compliance Inspection, Completion of 30-Day Corrective Actions

Dear Mr. Lynch:

On May 10 - 12, 2016, Department of Toxic Substances Control staff conducted a Focused Compliance inspection of the Shell Martinez Refinery. On June 2, 2016, Shell submitted a letter demonstrating return to compliance for the three violations identified in the Summary of Violations received by Shell at the end of the inspection. On July 14, 2016, DTSC staff sent Shell a follow-up report with additional violations. The purpose of this submittal is to respond to the items identified in that report.

Item 1 (p. 12) regarded annual hazardous waste training of 21 PSC employees. Not all of the 21 employees identified in the original e-mail are currently employed by PSC at Shell. Training documentation for the current PSC employees who could be assigned to the CO Boilers is attached.

Item 2 regarded a fly ash stain on the pavement near the CO Boiler Main Hopper. An air purge line was added to the Main Hopper, which is expected to prevent the small releases of fly ash while loading super sacks (Photograph 1). Additionally, the stained pavement has been cleaned (Photograph 2).

Photograph 1.

Photograph 2.

Item 4 (p. 14) regarded an aerosol can container that did not have a hazardous waste label. The container has been labeled, and a photograph was included in the June 2, 2016 submittal.

Item 5 regarded manifest discrepancies on three manifests from 2014. A Manifest Correction Letter was submitted to DTSC on August 3, 2016. A copy of the submittal is attached.

If you should have any questions or need additional information, please contact Mr. Michael Monson at (925) 313-5516.

Sincerely yours,

Gordon Johnson
Manager – Environmental Affairs
Shell Oil Products US, Martinez Refinery

Attachments

ATTACHMENT I-C

Department of Toxic Substances Control

Edwin F. Lowry, Director
700 Heinz Ave, Suite 200
Berkeley, California 94710

Winston H. Hickox
Secretary for
Environmental
Protection

Gray Davis
Governor

COMPLETE COPY OF PERMIT IN PERMIT BINDER

August 21, 2003

Mr. John Lazorik
Environmental Engineer
Shell Oil Products US, Martinez Refinery
P.O. Box 711
Martinez, CA 94553-0071

APPROVAL OF DELAY OF CLOSURE OF BIOTREATER, MARTINEZ REFINING COMPANY, A DIVISION OF EQUILON ENTERPRISES, LLC, MARTINEZ, CALIFORNIA, EPA ID No. CA 009164021

Dear Mr. Lazorik:

The Department of Toxic Substances Control (DTSC) has reviewed your Class 2 Permit Modification requesting a Delay of Closure for Surface Impoundment, Effluent Treatment Pond 1 - Biotreater.

DTSC has determined that your application is technically complete and hereby approves the Delay of Closure of Biotreater. Please note that

1. The ETP-1 Biotreater is permitted to accept non-hazardous wastewaters only.

2. Groundwater monitoring will continue to be managed under the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Order 95-234. The SFBRWQCB is the lead agency for sitewide corrective action in accordance with SB1082. Any changes made to Order 95-234 are subject to review by all interested parties including DTSC, providing the DTSC an opportunity to comment on any proposed changes.

3. "The Groundwater Boundary Control Capture Verification Modeling Report" will continue to be provided to DTSC and SFBRWQCB on an annual basis. This report shall include a section that summarizes the activities that took place during the year as a result of recommendation made in the prior years' report.

4. Permittee is no longer required to comply with the hazardous waste inspection, records keeping, and training requirements for this specific Biotreater unit, since it is no longer processing hazardous waste.

5. The closure of this unit in accordance with the approved closure plan in the Part B application will be implemented when the unit ceases to operate.

We have filed a CEQA Notice of Exemption with the Office of Planning and Research. Enclosed is a copy of the Revised Permit.

If you have any questions, please call Waqar Ahmad of my staff at (510) 540-3932.

Sincerely,

Salvatore Ciriello,
Supervising Hazardous Substances Engineer
Standardized Permits and Corrective Action Branch

Attachment

cc: Patti Barni
Statewide Compliance Unit
Department of Toxic Substances Control
700 Heinz Ave, Suite 200
Berkeley, CA 94710

Norman Shopay
Geological Support Services Unit
Department of Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710

ATTACHMENT I-D

JEL

STATE OF CALIFORNIA — ENVIRONMENTAL PROTECTION AGENCY

PETE WILSON, *Governor*

DEPARTMENT OF TOXIC SUBSTANCES CONTROL

REGION 2
700 HEINZ AVE., SUITE 200
BERKELEY, CA 94710-2737

File 6.4

March 21, 1994

Mr. J.C. Harmon, Manager
Environmental Conservation
Martinez Manufacturing Complex
Shell Oil Company
P.O. Box 711
Martinez, California 94553

Dear Mr. Harmon:

EXEMPTION APPLICATION FOR BIOTREATER, EPA ID NO. CAD 009 164 021

On March 27, 1992, you submitted an application for an exemption from the Minimum Technological Requirements (MTRs) for the Biotreater located in your Effluent Treatment Plant. The Biotreater became subject to hazardous waste regulations, including MTRs, upon promulgation of the Toxicity Characteristic (TC) rule on March 29, 1990. Unless an exemption is granted under RCRA, Section 3005(j), Shell must comply with the MTRs or cease receiving hazardous waste in the unit by March 29, 1994. The Department has reviewed your application titled, "Application for Exemption from Requirements to Retrofit Pond 7, the Biotreater Pond," dated March 1992, according to applicable state and federal regulations.

The Biotreater is considered a regulated hazardous waste management (HWM) unit under federal law. According to RCRA, Section 3005(j)(1), surface impoundments that become subject to regulation must comply with RCRA, Section 3004(o)(1)(A), which requires installation of two or more liners and a leachate collection system. The 1984 Amendments to RCRA provided a means for owners or operators of existing surface impoundments to obtain exemptions from or modifications to the liner requirements or MTRs. RCRA, Sections 3005(j)(2), (3), (4), and (13), provide four different avenues for obtaining this exemption. The Department reviewed your application and found that the Biotreater is eligible for an exemption under RCRA, Section 3005(j)(3).

Although inadequacies were found in the application, sufficient information was presented for the Department to, under its authorization authority, grant this exemption pursuant to RCRA, Section 3005(j)(3). The Department is preparing a list of deficiencies that you will be required to address in order for the Biotreater to remain exempt. This notice of deficiencies will be sent under a separate letter.

Be advised that failure to provide the requested information or discovery that the facility no longer qualifies for an exemption under RCRA, Section 3005(j)(3), may result in withdrawal of this exemption. Until a final permit decision is made, Shell shall operate the Biotreater according to California Code of Regulations (Cal. Code Regs.), Title 22, Division 4.5, Chapter 15, except for the requirement to install liners pursuant to Cal. Code Regs., Title 22, Section 66265.221.

If you have any questions regarding this matter, please call Sheila Alfonso at (510) 540-3968.

Sincerely,

Charlene F. Williams

Charlene F. Williams
Acting Branch Chief
Facility Permitting Branch

cc: Mr. Terry Seward
CRWQCB
2101 Webster Street, Suite 500
Oakland, California 94612

Mr. Ray Fox (H-3-3)
U.S. EPA, Region 9
75 Hawthorne St.
San Francisco, California 94105